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ABSTRACT

In 27 preschoolers observed social activity was significantly and positively correlated with physical, verbal, direct, and indirect aggression in girls (physical and direct aggression, p .05; verbal and indirect aggression, p .01), but negatively correlated with all but verbal aggression in boys (all p's .01). Boys had high physical aggression scores more frequently than girls (p .003); girls showed more verbal than physical aggression (p .01). Direct predominated over indirect aggression in both sexes (both p's .01). Sex differences in relationships of social activity to aggressions were attributed to differences in physical aggression, which was hypothesized to discourage interactions. (Author)

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Sex Differences in Children's Aggression[1]

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Abstract

In 27 preschoolers observed social activity was significantly and positively correlated with physical, verbal, direct, and indirect aggression in girls (physical and direct aggression, $p < .05$; verbal and indirect aggression, $p < .01$), but negatively correlated with all but verbal aggression in boys (all p's .01). Boys had high physical aggression scores more frequently than girls ($p < .003$); girls showed more verbal than physical aggression ($p < .01$). Direct predominated over indirect aggression in both sexes (both p's $< .01$). Sex differences in relationships of social activity to aggressions were attributed to differences in physical aggression, which was hypothesized to discourage interactions.

Murphy's (1937) study demonstrated a relationship between social interaction and aggression in preschoolers but failed to find sex a relevant variable; though sex differences in aggression have been occasionally reported elsewhere in the literature, there have been few attempts to clarify them. Comparing verbal and physical modes of aggression, Durrett (1959) found girls more verbally aggressive than boys. In Feshbach's (1969) study, adolescent girls were more indirectly aggressive than boys, suggesting the importance of a style dimension. However, none of these studies included dominance or non-compliance under the rubric of aggression. This omission seems to be important since these forms of aggression are more culturally acceptable in females than are the more explicit aggressions. The present study investigated whether sex differences in frequency of aggressing among preschool children are related to differences in rates of social interaction, and whether girls manifest aggression in different ways than boys do. Included was consideration of differences in

the style dimension--contrasting the active, direct aspect of aggression with the more passive, indirect aspect (e.g., bossiness vs. noncompliance, or scolding vs. teasing)--and differences in mode of expression, i.e., physical vs. verbal.

Procedure

Subjects. Twenty-seven Ss, CA's 2-9 to 4-2 (14 boys, 13 girls), enrolled in two preschool programs were observed. Families of the Ss in both programs were predominantly middle-class; both programs were interracial.

Social activity rate (SAR) and aggressive behavior rates. The SAR and aggressive behavior rates were independently established by two O's for each S on the basis of ten five-minute observations over separate two-week periods.

For SAR the frequency of both verbal and nonverbal events with peers or adults was recorded. The inter-O reliability for SAR, recorded simultaneously by two O's on a non-study sample, was .88 (Pearson-r). An event was credited each time S had a new opportunity to interact with another person, whether or not S initiated the event (adapted from Stevenson & Stevenson, 1960).

Aggressive behavior rates for each S were established for four classes of behavior: direct-physical aggression, indirect-physical aggression, direct-verbal aggression, and indirect-verbal aggression. The inter-O reliabilities for aggressive behavior classes, recorded simultaneously by two O's on a non-study sample ranged from .77 to .93 (Pearson-r's).

Results

Aggression and SAR. Significantly more boys than girls had high rates of social interacting when Ss were ranked according to their SAR scores (Mann-Whitney U=41, z=2.43, p=.01). Aggressive behaviors were categorized as

physical (P-Agg), verbal (V-Agg), direct (D-Agg), and indirect (In-Agg). Pearson-r correlations between SAR and aggression rates are shown in Table 1. For the total sample all types of aggression were significantly and positively

Insert Table 1 about here

correlated with social activity, supporting Murphy's (1937) finding. The same pattern was true for the subsample of girls. However, only V-Agg was positively correlated with SAR for boys. P-Agg, D-Agg, and In-Agg were all significantly but negatively correlated with SAR for boys.

Components of aggression. The Pearson-r correlations between aggression behavior frequencies are shown in Table 2. All significant correlations were positive.

Insert Table 2 about here

While all categories of aggression were significantly intercorrelated for girls, among boys V-Agg was not correlated with any of the other categories of aggression, although P-Agg, D-Agg, and In-Agg were significantly correlated with each other. The assumption that In-Agg is related to more explicit forms of aggression is consistently supported in the case of girls. In-Agg was clearly related to P-Agg and D-Agg for boys, but not to V-Agg, results which partially support this assumption.

Modality and style. The Mann-Whitney U statistic was used to test for sex differences on each category of aggression by ranking Ss according to the frequencies with which they manifested the specific kinds of aggression. Boys were high on P-Agg significantly more often than girls ($U=29$, $z=3.01$, $p < .003$), but there were no significant differences for V-Agg, D-Agg, or In-Agg. Within group comparisons on modality were made by classifying each S according to whether P-Agg exceeded V-Agg or V-Agg exceeded P-Agg. All girls using P-Agg and V-Agg

differentially (12 of 13 Ss) used V-Agg preferentially ($\underline{X}^2_c$=10.08, $\underline{p} < .01$). Nine boys used P-Agg preferentially and five boys used more V-Agg, a non-significant difference. Similar comparisons were made for style, with all boys using D-Agg preferentially ($\underline{X}^2_c$=12.07, $\underline{p} < .001$) and 12 of the 13 girls using more D-Agg than In-Agg ($\underline{X}^2_c$=7.69, $\underline{p} < .01$).

Discussion

Upon first analysis, Murphy's (1937) conclusion that there is a relationship between the frequencies of social activity and aggression is supported by the present findings. However, more detailed analyses of the data suggest that the direction of this relationship depends on the quantity and quality of aggression expressed. Verbal aggression, of similar frequency in boys and girls, was positively correlated with social activity in both sexes. For boys (among whom there were many more high physical aggressors than in the girls' group), physical aggression was negatively correlated with social activity, while for girls--who seldom used high rates of physical aggression--the correlation between social activity and physical aggression was positive. The possibility that this directional difference might be a simple sex difference is contradicted by the fact that inspection of the data revealed two discriminable patterns of boys' aggression. High social activity was associated with high verbal aggression but low physical aggression for one subgroup, while another group was marked by low social activity associated with low verbal aggression but high physical aggression. (The number of Ss was too small to apply statistical tests to these patterns.) In other words, a subgroup of boys showed a pattern like the girls', suggesting that the direction of the social interaction-aggression relationship depends primarily on the modality and relative frequency of aggression rather than upon the sex of the aggressor.

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Why is physical aggression inversely related to social activity while the relation of verbal aggression to social activity is positive? It seems possible that aggressing physically keeps others away from you, while verbal aggression does not. This is a directional hypothesis that cannot be tested by the current data although it has some face validity. This hypothesis is limited to the effects of physical aggression on interpersonal interactions. It should also be noted that the interpersonal nature of these interactions was objectively defined here; they might or might not be subjectively experienced as interpersonal situations by the Ss themselves.

There was a striking sex difference in the use of the physical modality for aggressive expression. Girls used physical aggression so much less than boys that the aggression of girls was predominantly verbal. For both sexes aggression was predominantly direct in style. This latter finding is not consistent with Feshbach's (1969) and suggests that, at least for preschoolers, modality differences, not style differences, explain the aggression differences between boys and girls. An alternative explanation for the discrepancies between the Feshbach findings and those of this study may be the differences in the ways indirect aggression was defined; i.e., the inclusion of noncompliance under indirect aggression here may have increased the total amount of indirect aggression for boys more than for girls, obscuring real differences. (This hypothesis could not be tested because of the way the data were originally recorded.) Another alternative reason for the discrepancy may be that the aggressions observed occurred under quite different circumstances. Feshbach observed aggression occurring in a single, contrived situation which provided little opportunity for physical aggression, whereas the present study observed aggressions over many spontaneous situations.

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Footnotes

1. This study was supported by a grant from the N.Y. State College of Human Ecology at Cornell. Mrs. Jean Strout deserves special thinks for her efforts in the collection of data.

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TABLE 1

Correlations of Social Activity and Aggression Rates

	Tot-Agg	P-Agg	V-Agg	D-Agg	In-Agg
Boys	-.69**	-.76**	.72**	-.73**	-.76**
Girls	.72**	.62*	.74**	.60*	.85**
All Ss	.52**	.32*	.64**	.50**	.50**

*$p < .05$, **$p < .01$

TABLE 2

Intercorrelations of Aggression Categories

Agg	All Ss			Boys			Girls		
Types	V-Agg	D-Agg	In-Agg	V-Agg	D-Agg	In-Agg	V-Agg	D-Agg	In-Agg
P-Agg	.64**	.91**	.74**	-.36	.99**	.99**	.83**	.93**	.73**
V-Agg		.88**	.80**		-.32	-.37		.89**	.82**
D-Agg			.74**			.99**			.72**

** $p < .01$